

TOKYO PUBLIC HEARINGS

AFTERNOON SESSION  
February 27, 1986

Tape 1 to 2

TAPE 1 - SIDE 1

Public Hearings  
February 27, 1987  
Tokyo, Japan

Dr Okita

Thank you for waiting. We would like now to open the Public Symposium sponsored by the World Commission on Environment and Development. I am Saburo Okita who is a member of Japan participating in the World Commission on Environment and Development run by the United Nations. Ever since its inception in 1984, this Commission has for three years looked into the problems of realizing a beneficial environment for the world towards the 21st century. And we have been engaged in active discussions and deliberations for this purpose.

The meeting in Tokyo started on the 23rd, this Monday, and all of the deliberations have been safely concluded as of yesterday. There was a closing ceremony held this morning and as a culmination of the activities of the United Nations World Commission on Environment and Development, the Tokyo Declaration was promulgated to the world this morning. And the final report is due to be published very soon after the necessary hand has been put into the draft.

We have had the honour of the presence of our Prime Minister, Mr Nakasone in the Closing Ceremony. We have had the co-operation of many international institutions, many nations of the world, people in the industry, as well as non-governmental organizations and the public. And we have

been able to engage in honest and sincere exchange of views. During this course we were able to hear invaluable reviews from expert in this field and have been able to gather insight into what should be done towards overcoming the various obstacles in order to realise sustainable growth and development.

This special Commission has completed all of its discussions and deliberations and we have now been able to come to hold a common understanding concerning what's to be done for the sake of preservation of an ideal environment for the world towards the 21st century. We consider that what is very important at this stage is now to commence dialogue with people around the world because in order for us to realise the fruits, the results of the deliberations we would not be able to do so unless we will have a lot of dialogue and be able to have part of understanding of many of the people around the world. And only by such means we will be able to make our effort a meaningful one. Because it is the people around the world who are going to be engaged in this process.

This symposium was planned as part of this kind of an understanding on our part. And it is therefore a great pleasure for us to be able to witness that this kind of a symposium is held in Tokyo after the conclusion of the Commission's deliberations here in Tokyo.

First, I would like to call upon the Director General of our Environmental Agency, Mr Inamura to give us an address. He has visited last December the country of Norway and has conferred with Madame Chairman Brundtland and has contributed a lot to the success of the Tokyo meeting.

Unfortunately, Madame Chairman Brundtland, who was supposed to chair this symposium in person herself, was unable to witness the opening of the symposium today because of the unexpected happening which occurred yesterday. The foreign minister of Norway has passed away unexpectedly yesterday and therefore the Madame Chairman has to leave Tokyo immediately

for Norway. She did express her regrets on not being able to chair this session.

However, we have the Vice Chairman, Mr Khalid, to chair this session for us. We also have with us a number of Commission members and we do look forward to the exchange that we will be able to have with them and I would like to introduce them when the discussion takes place at a later stage.

First, I would like to call upon our Environment Agency Director General.

Mr Inamura

Mr Chairman, ladies and gentlemen, I take pleasure in saying a few words on the occasion of the Public Symposium on the Tokyo Session of the World Commission on Environment and Development. The Commission since it was established in October 1984 has worked towards the ideals of the global environment in the 21st century. After three years of deliberations, it has finally concluded this morning and in the closing session it has adapted a Tokyo Declaration. It is with great regret that we do not have the presence of the Chairman, the Hon. Brundtland who had to return to her country of Norway because of urgent matters. I would like first of all to express my appreciation to her for her effort in the last two years. I should also, at the same time, like to offer my words of admiration and commendation to the Vice Chairman, Mr Khalid, and the members of the Commission and also the staff of the Secretariat.

I understand that this Public Symposium has been held in order to provide a forum for discussion between the members of the Commission and the public at large on the Tokyo Declaration. That there will be a constructive and frank discussion so that there will be a shared common perception in the need for ensuring an international action that would contribute to the

survival and the welfare of the people, as well as protecting the environment and sustaining development. I sincerely hope that people in the audience will take part in this symposium.

For some years we have recognized the importance of global environmental issues and the urgent need for adapting measures. But the issues are complex and interrelated and, generally speaking, there is a great deal of time and expensive ...before we can amass the necessary scientific knowledge. And at the same time, once the global destruction of the environment has taken place, it is not easily restored, so the experts say.

How should we cope up with this situation? What is the wise way to approach it? Institutional reforms must take place and those are the matters for policy-makers. We should also study the international co-operation involved. But as important, and as more important is that each one of us a citizen of the global community accepts that this global environment is my own issue, and that he or she would do his or her very best in his position and his profession. That means to say we will care about the environment in our daily life. That we will see to it that our profession and the organizations to which we belong contribute to improving the environment for mankind. I think that is as important as other reforms.

The problems of environment involves the lifestyle of every citizen and his or her various system. The solution of the environmental issues should not be left to a handful of people. It should be everyone's problem, that each one as an inhabitant of this planet Earth should contribute his own problem in resolving the problems and protecting the environment.

The five panelists who will be participating in this symposium will be bringing to the forum their experience and their conviction. They have over the years taken active steps in resolving these problems, and I hope that the experience, the

opinions will add to the conclusion adapted by the Commission. And also the use of the people will contribute to realising the environment of the 21st century and that we all be convinced that we should all act to protect the Earth's environment and realize the sustainable development.

I have participated in the opening session on the 23rd and I had had the pleasure of meeting for 20 minutes with the Chairman Brundtland and I have reported to the Prime Minister, Mr Nakasone of my meeting with the Chairman Brundtland. And today, at the closing session we have had the presence of the Prime Minister. The members of the Commission have given their lives, given their energy to sustainable development. The Prime Minister, having listened to my report, said he would like to come to the closing session and he has put his own conviction in his message. He wanted to appear in person to meet the members of the Commission and to share with them his appreciation of their effort and his commitment to the theme of sustainable development. The Prime Minister wanted them to know that he is committed to realizing this sustainable development. Thank you very much for giving me the attention.

Dr Okita

Thank you very much, Mr Inamura, Director General of the Environmental Agency. I would like, with the permission, to remain seated here and I would like to call upon the Vice Chairman, Mr Khalid who will be replacing the Chairman to give a keynote statement.

Dr Khalid

(see enclosed copy of speech)

Dr Okita

Thank you very much Dr Khalid. May I have the pleasure of introducing to you the members of the Commission here. On my left Judge Nagendra Singh, President of the Court of Justice, he's from India; next to him is Mr Nogueira Neto, he's from Brazil; next is Mr Ruckelshaus, he's from the US, he's ex-Administrator of the Environmental Protection Agency; Mr Sahnoun is Algerian ambassador to the United States, he's an expert on international affairs; Mr Stanovnik of Yugoslavia, member of the Presidency of the Socialist Republic of Slovenia, he used to be Secretary General of the UN Committee; Mr Emil Salim, he's a well-known figure here, he's from Indonesia, he's a Minister of State for Population and Environment; Dr Khalid, he's ex-Foreign Minister of Sudan, who just gave us the keynote address, and he's the Vice Chairman of the World Commission on Environment and Development; and Mr Lindner, Deputy Secretary General of the World Commission on Environment and Development; Mrs Marino de Botero, former Director General, National Institute of Renewable Natural Resources and Environment, from Colombia, she's an expert on environment, she's a very active environmentalist, she's an advocate for environment and she has actively participated in our discussion; Dr Ma Shijun from China, Director, Research Centre of Ecology of Academia Sinica; next to him is Dr Hauff from the Federal Republic of Germany, former Minister for Science and Technology. This concludes the introduction of the members on the stage. We have a few members who are not here on the stage.

May be we would like to invite Mr Lindner to explain to us how we will proceed in today's forum, Public Symposium.

W. H. Lindner

I hope that all of you have a programme in front of you. If you have seen the programme and if you look at the programme, you will see that today we have five presentations to be made

to the Commission. The five presentors are seating here at a table directly in front of us. Each presentor will take 10 minutes to make their statement. At the end we would ask the presentors to please speak from the podium if you would. We would take all of the five presentations before we will open the discussion for questions from the presentors to the Commission and from the Commission to the presentors.

During that period of discussion there will be a number of ushers passing through the audience to take the questions from the audience in written forms which you might wish to pose to the Commission on the Tokyo Declaration, on the work of the Commission, of the issues it is addressing, or to make any statement that you might wish to bring to the attention of the Commission.

I would ask however that when you write your question or write your statement, if you could clearly write your name and your affiliation which will permit us to identify you when we call on you later in the session. At the end of the discussion between the Commission and the presentors, we will take a short break to permit us to go through the questions, have them translated to us, give us an opportunity to review them, and we will re-gather after 15 or 20 minutes and begin to take the questions at that time.

We will call the person who has posed the question, we'll ask you to identify yourself and come to the podium and pose the question to us, then will conduct to begin the discussion on it. I hope that that is clear. We are very pleased, I must say, if I may add a personal note, that we have seen and conducted public hearings in all the major regions of the world, and we heard many credits to Japan today, to the Japanese government and I would personally add credit to Japan and that is, this is the largest single audience we have had on the first day of the public symposium that we have held around the world. And we're very pleased that you are here.



Dr Khalid

Now, our first presentor is Professor Kihara, Professor in the College of Arts and Sciences, Chiba University.

Keikichi Kihara

I would like to talk you about our environment administration and how the citizens have been coping with the problem of environment. I have been listening to the presentations which have been made this morning and have been recalling what has taken place in 1972 at the UN conference on environment. At that time I was participating as a journalist and I have come to the understanding that after 200 years of industrial revolution, mankind is now placed in an environment which it is supposed to change, the way things have been. And a statement was held and was adapted on the occasion of that conference on human environment.

The Tokyo Declaration was made clear today but I think that the Tokyo Declaration is going to serve to solicit more participation of people for the purposes of strengthening the environment. And as a Commissioners has said it is important to have the participation of people in this movement. I am very much for such kind of action to be taking place.

When we look at the administration of environmental policies and how the people have been taking these, we have seen that there some co-operation between the two parties concerned. At the Stockholm Conference, our Environmental Agency Director General, Mr Oichi, had made it clear that the pollution in our country is very serious. The air is polluted, the lakes and water are polluted, the cities have become much densely populated and the natural environment is being destroyed.

There was a lot of concern expressed from among the people for the kind of environmental destruction that is taking place.

And there were even cases on which people went as far as to indict the government. Of course, associated with these rows were a number of movements against pollution.

It was in the end of 1970s when a special session of the diet was held to deliberate on the issue of pollution. As a result the Environment Agency was established in 1971. I do remember the time in which the Environment Agency was instituted in the first of July. The signboard saying Environment Agency was put up in front of the building of the Environment Agency's office which was just opened by the Director General of the Agency, and I was very much impressed by the fact that many patients of the Minamata disease were looking very seriously when the signboard was being put up. I think it was a very symbolic thing which indicated that the Environment Agency was only a product of the peoples' movement, of popular movement to control the environment.

Ever since the inception of the Agency, there has been a lot of policies implemented to control sulphur dioxide, heavy metals particles, NO<sub>2</sub>s, PCBs, chemicals, etc. For instance, there is a very strict regulation concerning the control of emission from automobiles. Many in the industry have said that the level of control was too strict to be observed. But the authorities were die-hard and stuck past to their policy and therefore, the industries had to comply with the measures that were imposed on them. As a result they were able to produce cars which, though fairly emitting fuel, are meeting the standards. And even so they were able to compete in the world market.

There are also some measures devised to compensate health damage by pollution. Taxes were levied to the industries which are causing the pollution so that part of the taxes could be used for the compensation. Such policies were effectively implemented only the co-operation of the people and the local government parties. Without the support of the people through the popular movement and without the government authorities such kind of policies could not have been effectively implemented.

As a result of the implementation of the very strict control measures, the state of pollution was alleviated very much. The move toward saving energy and saving resources has become very popular. Of course, we can not still feel very safe even at this stage. Look at Tokyo and Osaka, the major metropolitan cities of Japan, the pollution level in the air is very great with the rapid increase in the number of automobiles. Sometimes it appears to us that it is very difficult to try to obtain the targets established by the Environment Agency.

There are also pollution of the semi-closed water areas, lakes, swamps, Tokyo Bay, Osaka Bay and Seto Inland Sea. There is also the pollution caused by noise of automobiles, aircrafts and trains. It is very important that the government authorities try to implement strictly the measures that have been imposed. But unless this can be done satisfactory environment can not be brought forth. And under such situation various people's movements are getting together to make assessment of the environment and compile reports to let the authorities know what's happening with the environment.

There are also people saying that as a result of such investigations that the Environment Agency should not ...concerning the designation of polluted areas and the compensation of health damages brought about by pollution. Looking at the types of natural environment destruction, there are destructions of many tourist sites, the seas, underwater sea basins where there are lots of beautiful coral reefs are beginning to be destroyed. There are movements that have gathered, people's part, to try to protect such natural environment.

So people are taking a very serious view towards the environment issue. They consider the preservation of the environment to be a very important issue. Because pollution is such a great issue here in Japan, people initially look only to pollution as a means of alleviating the destruction of the environment. But on second glance, people come to realise that

pollution is caused not by noises, air and water pollution, but also by destruction in the natural environment as well. And so there were a lot of movements which cropped up to try to save the natural environment and to preserve the historical environment which is also being destroyed with the changes in the time.

For instance, in the 1960s the preservation of the national parks in Seto and Hokaido, the northern part of Japan, was considered to be very important. They are a part of the tea centres. There is also great concern expressed towards the need of preventing small-scale natural environment which are found in the cities too. People realised that cities too natural environment among them. So, not only large-scale natural environment but also small-scale natural environment. A medium-scale natural environment was considered to be important target of implementing environmental policy.

After that people shifted their eyes to the preservation of the natural environment throughout the world. So, people's eyes are shifting to different types of environmental issues, and I think that this is a good step, the people's vision is expanding. Thailand, Nepal, China, Tanzania, Zambia are areas where people have come to express concern and they have expressed in preserving the forests there, and they have also expressed interest in preserving lakes and swamps, and water as well. In 1984, a conference on the preservation of lakes was held in Ajira(?) Prefecture.

So, with the changes in the time and with the changes in people's perception of the environment issues, the manner in which the problems of environment has been tackled has changed as well. Very recently, against the pollution of Biwa(?) Lake there has been a movement to avert the use of phosphorus-containing detergent so that water in that area can be preserved in a very clean state. People living around Biwa Lake, for instance, have got together to show their concern and have shown their determination to not resort to

phosphorus-containing detergent and to use more natural types of detergent so that they will not be destroying the environment.

The people even got together to try to preserve the environment by trying to buy small pieces of land which they considered to be very important in order to preserve a natural environment. This is manifested in what is called the National Trust Movement which is trying to preserve large areas of the natural environment in Shiratoko(?), etc. and other parts of Japan.

So, people have a great foresight and vision on what should be done to preserve nature land the environment around them. The administrators and the Environment Agency have also come to consider that it is important to create amenities for improving the environment. They have also established a long-term vision for preserving the environment into the future, into the 21st century.

There has been increasing concern expressed over the necessity of adapting more policy measures so that the environment can be preserved clean and in a healthy state long into the future. The establishment of an environment monitoring network for the Pacific and the Asian region and the establishment of...for deliberating issues on a global scale is a manifestation of their concerns over the protection of the environment.

I think that it is important for us to uphold the projects that are laid out by UNDP.

Dr Khalid

Thank you very much, Prof. Kihara. The next presentation is from the Director of the Environment Protection Department, the Tokyo Electric Power Company, Mr Kobayashi.

Osamu Kobayashi

Thank you very much, Mr Chairman. I would like to speak as a person who is involved in the environmental protection in the electrical power industry of this country. I shall be sharing with you some of the measures that the electrical power industry has adopted in fighting pollution.

But I would like to bring forth two points which are uniquely Japanese. One is that from about the second half of the 1950s to the first half of the 1970s when we had the first oil shock, in these two decades, we had a dramatic, rapid growth of the economy, unparalleled anywhere else in the world. The GNP on the average for 15 years was at 10%, a formidable record. This growth shows the bottom, shows the OECD average in GNP growth rate and the top the Japanese average growth rate in GNP.

In the process, there were serious environmental problems but because the government, local governments, the industry and the people fought together we have been able to improve the degraded quality of environment.

The other point which I want to say is that 70% of Japanese land is mountainous. You see the green belt, the green area is mountain range. So, the residential areas, the plants and factories are all concentrated in the coastal flat land which is a very limited, narrow strip of land. For this natural reasons, conditions, the Japanese industries have had to live with a very stringent environmental requirements.

While Japan consumes about 5% of the world's energy, Japan emits only 1% of SOCs(?) and 2% of world's emission of NOCs(?). Japan consumes 5% of world's energy but the emission of SOCs is 1% and 2% of NOCs is 2%. The electrical power industry which provides 40% of the final energy consume in this country had had the similar experience.



## **WORLD COMMISSION ON ENVIRONMENT AND DEVELOPMENT**

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### **KEYNOTE ADDRESS**

**Dr Mansour Khalid  
Vice Chairman**

**World Commission on Environment and Development**

**Public Symposium  
27 February 1986  
Tokyo, Japan**

**Honourable Minister  
Your Excellencies  
Ladies and Gentlemen**

**With the commencement here today of this first public symposium on the issues we have addressed in the World Commission on Environment and Development, we embark on an entirely new phase of our work.**

**It is of course a particular pleasure to begin this new phase here in Japan. We are very honoured to be here. The farsightedness and generosity of the government of Japan has been one of the most essential driving forces which has enabled our Commission to undertake this major task on behalf of the future generations of mankind.**

**The Japanese government was a chief instigator of the World Commission on Environment and Development and has remained staunchly at our side throughout three hard years of work, encouraging us and supporting us.**

**Now that the process of compiling information, of evaluating our findings and formulating our policy recommendations has been finalized here in Tokyo, it remains for us to complete and publish our written report, and to do everything in our power, with your continuing support, to create an international debate around these vital issues. This symposium will be the beginning of this wide debate which concerns us all.**

The power to change lies with governments and with the international institutions, but down at the roots - and this is absolutely central to all our thinking - it lies with people. It is people, of north and south, of east and west, rich and poor, who must live with the consequences of global mismanagement. If the Earth's managers get things wrong, it is people who end up breathing poisoned air, drinking polluted water, suffering the effects of radiation, deprived of forests, tilling exhausted soils, hungry and impoverished.

Throughout our three years of investigation, it is to people that the World Commission on Environment and Development has addressed itself. It is people we are concerned about, the rights of people - to a decent life wherever they may happen to have been born, and to a proper and fair chance for their children, your children and mine, long into the future.

It is fundamental to bring the issues out into the open, to reach the hearts and minds of people. They are too important to be entrusted to the few, and I intend no disrespect here to politicians and bureaucrats, but we are speaking of rights which are fundamental to all people, today and tomorrow.

In the past few years we have travelled to all the corners of the Earth in pursuit of information, of views and recommendations, from people, organisations and statesmen. Now, the time has come for presenting our findings to the people, to national leaders and to organisations.

We believe that there is a need for a groundswell of public concern all over the World so as to bring pressure to bear on those who make decisions. And to achieve this, public debate - which we are starting here this afternoon in Tokyo - will be vital.

Because I believe we are all aware by now that if governments are to alter their policies - and some of them, believe me, may take some persuading - it is from people that the impetus to change will have to come.

Governments, and those who constitute them, come and go and are unfortunately locked into a system which militates against long-term considerations, but rather in favour of short-term gains.

But as we on the commission have seen, the situation we face today has become far too serious to be manageable by any one government or regional group, or by any single international body.



If sustainable development is to become reality, it must become reality on a global scale, with all of humanity involved regardless of ideological or political motivations. For the whole of humanity is involved. We have not before had to face a common crisis and elaborate together a common set of policies with which to confront it.

But we do have this situation before us today. And we have to respond and act in a new way. We can no longer leave it to the politicians. We are all in this together.

And perhaps this is the real spirit of Tokyo, and of the Tokyo Declaration. It is a spirit of common concern, of common consultation and of common action.

If we are to succeed in this, and succeed we must, the debate which you and I are beginning here in this room this afternoon must go out of here, and grow and develop, and be conducted throughout the World, through the media, among people, among countries, until the force of humanity's drive for change, for a new era of development in harmony with nature, brings about the change we must have.

And in the spirit of common concern for all members of the human family, I am happy to be with you here on this occasion.

Thank you.

TAPE 1 - SIDE 2  
Afternoon Session

Cont. of Kobayashi's statement

When the Japanese economy was growing very rapidly, Tokyo Electric Power Company alone invested every year in capital investment of 1,000 megawatts and about 10% growth compared to the previous year. The electric power plants for Tokyo Electric Power Co. is the hydro power plant, the nuclear generation power plant which are located in the diameter of 200 km, and also some thermo-plants which are located in the Tokyo Bay. And since these power plants have been located near the consumers' market and they have big capacity, oil-burning and gas-fired thermo plants.

So electric power industry has to provide the electricity. In other words, it must own a distribution network to the users. We must manage this distribution network. For that reason, the electric power business is really a user's business. The business has to be good for users and it must have perfect co-operation with the local community and the users. And for this reason, the electric power industry has been committed to fighting pollution, pollution abatement has always been a basic management policy. We set up the organization and we have experts in fighting pollution.

So let me show some of the basic measures that the Electric Power Co. has adapted. Electric power is a clean energy and it contributes to a good urban environment and to the residential environment. But it must also minimize the adverse impact to the environment in generating electric power in transmitting electric power. In terms of controlling air pollution, we adapt measures to burn clean fuel and invest on equipment. The higher the quality of fuel, the cleaner the environment.

Tokyo Electric Power Co. was the first in the world to introduce LNG, that was in 1970 in Minami, Yokohama. LNG has zero sulphur and zero dust. And this is the thermo-plant located in Minami, south of Yokohama. The following year, in 1971, Owi thermo-plant which is very close to Tokyo, Tokyo Electric Power introduced the minus crude which has a sulphur content of .10%. This was done in accordance with the agreement that was signed between the industry and the local government. But, of course, one has to buy LNG 10 years before burning them in the thermo-plant. In other words, industry had had to make a decision 10 years before it signed an agreement with the local government.

In the case of the Tokyo Electric Power Co. it used to buy coal and then oil. But today, as you see here, the nuclear power is the largest energy, and other fuel. So one-third is nuclear power, one-third is LNG. And the rest of the fuel is one-third. The lowest is the hydro. So we will adapt a best mix policy where electric power sources are concerned.

In terms of investment in equipment, we have invested in the highest level of de-sulphurisation and de-nitrification, dust collection equipment and higher stacks. So, Tokyo Electric Power Co. has more thermo power plants but compared to 1973, soft emission has been reduced to one-fourth, the top graph shows that, the emission of NOCs, lower graph, has been reduced to one-third, compared to 1973.

The other thing which we have greatly endeavoured is to plant greens in the power plant and in the sub-stations. We have adapted an ecological method so that we have broader trees which do not shed leaves in winter. So, 65% of the nuclear power plants sites is green; 30% of the thermo plant sites is green. We have planted greens. Since most of the land which was reclaimed from the sea is used for factories, greening of those reclaimed lands means additional green to the whole of the Japanese land.

Before constructing an electric power plant or sub-station, we undertake a very large scale survey in order to minimize adverse impact to the environment and a selection of policies and measures are done very selectively. In other words, electric power industry is committed in contributing to the best of the local community.

Problems of acid rain, CO<sub>2</sub>, desertification are some of the global environmental problems. They go beyond national boundaries and have become global issues. The need for greater international collaboration is more not less.

How can the Japanese industry contribute to protecting the world's environment? Of course, the first commitment of the Japanese industry the commitment to protect the environment back home. But beyond that initial commitment, I feel that the Japanese industry can do more. And let me give you a few proposals.

The first, is that we can always share our experiences in fighting environmental problems with others. As I have said the beginning, Japanese land conditions, natural conditions are very, very stringent. And when economy grew very rapidly, we have deteriorated the environment. But we have precious experience of reversing that trend. One example is that per unit of generated electric power per kilowatt hour, for instance, compared to the OECD's five-nation average, our standard is one-eighth of OECD for SOCs, one-fifth of NOCs of OECD; left is the OECD, yellow is the SOCs and the green is the NOCs, and the left columns are the OECD's five major companies, and the right columns are the Japanese. So per unit kilowatt hour, emissions of SOCs and NOCs are very low. And this experience that we have been able to amass can be shared with other societies.

Secondly, we can offer the advance technology in fighting pollution. We can continue to invest in developing technology. One comparison is the off-gas treating equipment

that we have in this countries and those which are located in other countries. In this country, there are about 1,600 off-gas treating equipment, USA has only 200, Western Europe including West Germany are just beginning to introduce off-gas treatment equipment. De-nitrification equipment, there are 215 in Japan but the other countries have only began to plan introducing de-nitrification equipment.

We believe that we can also provide technological co-operation or environmental assessment or other pollution abatement measures toward the developing countries which must develop their economies in the future.

The third kind of co-operation is that we can provide expertise in monitoring analysis of cause and effect and measures on acid rain and  $\text{CO}_2$ , some of the global environmental problems. Japan can contribute to and be part of the research on acid rain and  $\text{CO}_2$ . True, business exists to pursue profit but the fundamental *raison d'être* of a business is to serve the community and serve the people. And so contributing to better environment is part of the *raison d'être* of our business.

As I have said the Japanese quality of environment has been improved compared to the past. And we shall continue to do our best to fight pollution, and we shall do everything to prevent degradation of the environment in the future. And we shall do everything to create new environment which is attractive, urban environment and green environment. These are some of the tasks that were given to the business. Thank you for your attention.

Dr Khalid

Now the next presenter is Mika Sakakibara, student from the Tokyo University of Agriculture and Technology.

Mika Sakakibara

Thank you. I'd like to talk about the actual environment protection movement in our city. Do you know Oomurasaki? It's a rare specie of butterfly which wings' span is 10 centimeters. Oomurasaki, big purple is named after the dark purple colour of the male butterfly. Their wings are very strong, you can hear the flapping of the wings. They reproduce once a year. The caterpillars eat leaves of hackberries and the butterflies sucks the juice of oaks.

Oomurasaki used to be a large, beautiful butterfly and can be found everywhere. It was designated as national butterfly of Japan by the Japan Society of Entomology in 1957. Oomurasaki, however, is decreasing in number year after year. Its habitat in Japan has been shrinking. In my town, Ranzanmachi, we used to see many Oomurasaki, but now its population has so decreased that it is rare for us to find them. Only few people in our hometown know the name of Oomurasaki.

Oomurasaki is the only one we are losing. Insects, animals which were so close to us in the past have disappeared. I think it is because us human beings have made ...into their habitat. Oomurasaki has decreased as a result of the loss of its habitat, the forest. Forest of broad-leave trees. Men used to take care of the forest. They used falling leaves as fertilizers and woods as charcoal and firewoods. Most of the broad-leave trees are hackberries, oaks which are food to larvae, caterpillar and butterfly.

In the forest one can find a rich ecosystem of flora and fauna. Man was a part of this ecological system when he took advantage of the forest. However, with the change in man's life, the forest has also changed. As man finds little usage of the forest, he does not take good care of it anymore. Moreover, broad-leave trees have been replaced by needle-leave trees, so-called soft woods which have higher market value. The forests have disappeared one after another as industrial plants and houses were built.

Our movement for the restoration of the Oomurasaki was launched to restore the good environment for flora and fauna including Oomurasaki, and increase its population. In 1970, the Saitama Prefecture made a plan for the creation of a Rest and Recreation Park. And our town, Ranzanmachi became a candidate for the project. Ranzanmachi is situated on the Hiki Hills between the Kanto plains and the Chichibu mountains range.

In spite of recent trend of urbanization, we still find fields, farmlands, greens, rivers. The purpose of the project is to review the natural environment of the town and restore good environment for local community. A part of the project which is a plan for forestation for Oomurasaki has started.

Three objectives were set for the forestation project. One, emphasis on the ecological system. The purpose of forestation is not only to restore the population of Oomurasaki but to restore and maintain natural environment as a whole. Oomurasaki can not survive in a vacuum. It can survive and breed only when it is a part of the ecological system of the forest.

For example, for butterflies to suck the juice from oaks they need larval of some of the insects to puncture the trunk of the tree. So the project aims to make a forest for all kinds of birds and insects including Oomurasaki.

The second purpose is to make citizens friendly to the forest. Everyone should be able to rest and enjoy oneself in the forest. People may enjoy walking through the forest while children can learn from it. A block of land will be reserved to make an experimental forest which is open to all citizens to make research there.

The third objective is the citizens' participation. The project was planned by the Prefecture of the government but it was implemented in co-operation with voluntary citizens' groups that is called Council for Forestation for Oomurasaki. The Prefecture government purchased 1.75 hectares of land in

November 1986. It was the first time that local government purchased a land for the sake of environment protection in Japan.

In 1987, a building for the secretariat will be constructed. After its construction, operation and management of the forest will be entrusted to the Ranzan town government and council, that is voluntary organizations. The council is represented by two primary schools, parent-teacher associations, and citizens' organization. The citizens' organization is named "A Group to Develop," its aims is not only to develop Oomurasaki but also to develop children who can appreciate the wonder of nature. In primary school, they have breeding yard where the children can breed and observe Oomurasaki. They feel close to it if they breed them from larvae to butterfly, and understand its ecology.

The adults are made up of parent-teacher associations and the citizens' group who do the weeding of the forest. Both the children and adults count the number of larvae which hibernate in winter at the root of oak trees. They take some larvae at school for breeding. The population of larvae has increased gradually during the year since the programme started. It may be due to the reproduction by butterflies released by children. Or may be due to the improvement in the environment. There may be some other good reasons for their increase. We'll have to find the reason why the butterflies have increased in number.

Reforestation for Oomurasaki has been conducted by both private and public sectors, and by both adults and children. I have been involved with this for the past two years. I have joined this movement simply because I like Oomurasaki. However, as I participate in the weeding or survey of the population of larval I began to enjoy doing what I can do for reforestation.

Reforestation has just started. It will not be possible to restore the population of Oomurasaki to the previous level.



The forest for Oomurasaki requires weeding, planting of trees and care and maintenance. The forest will be handed down to their succeeding generations. Isn't it wonderful to think that you are linked to the succeeding generations by handing down the forest where many Oomurasaki fly and people enjoy themselves?

It will be nice if we can develop in the heart of the children the love and affection for nature. We hope to make the forest we are making a gift to the children who will live in the 21st century. It is wonderful that people co-operate with each other. What one can do may be small but if you co-operate you can do something better and something big. It is the wish of all people concerned to hand down from generation to generation the forest where Oomurasaki fly and citizens can enjoy and take rest.

I think I will live in the 21st century. I hope the Earth in the 21st century will be a nice place to live in for all the living creatures. It will be a nice place to live in for human beings as well as for animals. If one has to contribute to make the 21st century a better place to live in, you should start with what you can do at hand. I hope I can contribute what I can do to make the Earth a better place to live in toward the 21st century through my participation in local forestation movement. I sincerely hope that in the 21st century people can enjoy watching Oomurasaki fly in the forest. Thank you very much.

Dr Khalid

Thank you very much for an excellent presentation. Now next presentation is from Ayako Yamada, Head of the Better Living Section, Shiga Prefectural Union of Agricultural Co-operative.

Ayako Yamada

I come from the city of Ochu(?) in Shiga Prefecture where the first international conference on lakes was held. Citizens' movement is a slow movement. It takes time and some of the activities that I will report to you today had taken 7 years including the detergent movement that I have conducted prior to that, which took 15 years.

So it seems that I will be making the same report but I think as citizens' movement is a repetitive kind of activity and in that repetition people join the movement and the circle becomes larger and larger. So perhaps my report is something that some of you may be familiar with because I am committed to conserving environment.

The concept of different movements is the same but there are two organizations that I work for. One is the Livelihood Co-operative Association of Ochu city and the Agricultural Co-operation Association where I have been working with for the last 5 years.

Let me begin with the Livelihood Co-operative Association and the kind of activities that's taking place there. The Environmental Housekeeping book follows the detergent movement. It was about 13 years ago when I began to live in Ochu city and from that time on I felt that water has been polluted because of the overuse of the detergent. And I felt that we must do something about it. Our city was the first to enact the local regulation to protect the water of Lake Biwa. Just because we have the regulation doesn't mean that the Lake Biwa becomes green overnight.

At that time I came across Dr Soyoshi and others of the Osaka University's Environment and Engineering Institute, and they were talking about this Environmental Housekeeping book. It was a very unfamiliar notion but the four of us, the staff at the Livelihood Co-operative Association wanted to learn about

this new concept, the Environmental Housekeeping book. And that is like having a checklist of life or checklist of environment. We took this to the local community, to the housewives and to the students. And we have distributed the fourth Environmental Housekeeping book just a while ago.

We believe that we do not exist in isolation. We are a part of a large, social community and part of an even larger national community and natural environment. We have but one existence in that large environment. We have sought more comfort, more convenience. We have stripped the environment. We have dumped on nature the refuse of our activities. And we might convince ourselves that our life is more convenient but along with that convenience we have brought about a number of problems. The red tide of the Lake Biwa, obnoxious smelling water, dry ...gas, unsafe food, radioactivity, soil contamination, degradation of the land, excessive use of chemical materials, use of detergents, the water pollution, the fuel gas, the change of ultraviolet rays and temperature because of the fuel gas. The air pollution because of the emissions, the loss of the green, changes in economic patterns, food-consuming patterns.

We're degrading our farmlands, we are diminishing our green and we are deforesting. Some of our rice paddies are not used. The unused farmlands contribute to the degradation of the natural environment. Excessive use of pulps(?), deforestation, also diminish greenery.

These are not immediate threats to our health but they would one day have adverse impacts on sound body and sound mind. If not in this generation then in the next generation. Have we not pursued convenience at the sacrifice of others? Have we not been inconsiderate to nature? What we do everyday without thinking much? Aren't those activities polluting the environment? Should we not check what we do without thinking.

Nature is limited. Past activities are interlocking the cycle of nature, may be we are suffering the cycle of nature. So, as you check one's activities, there are many things we realize we can change and do better. Of course, we can not reverse the clock and go back to the primitive way of life but we can change our actions so that we will pollute the environment less. We might suffer the inconvenience but for the best benefit of all. One act is small but the sum of those small actions can be very large. And if more people will get involved those small acts can sum up and abate the degradation of the environment.

One can begin with oneself. Is not one activity having adverse impact on the environment? If we are more conscious of what we do then perhaps we can stop the pollution of the environment. Companies which are collectivity of individuals might think differently about the food that...service. Perhaps the industry will change its thinking that profit can be pursued at the sacrifice of all the others. May be it's a dream but I think change begins from oneself, if one changes the habit of one's life, or one educate the children to change their ways, then in a small way we can stop the degradation of the environment.

So, four of us as the nucleus of this movement we appeal to everybody to stop before they use detergents, soaps, or even cars, or eat outside, and we will provide them with the checklist, and we'll give them values, when they wash dishes, aren't they using too much detergents, and they should check to give themselves point five or five three. This is a small thing but it gives a chance to check one's habits, one's activities.

This is has a nationwide support and the checklist forms have been distributed in the Ochu Livelihood Co-operative Association which is gathering those checklist forms and we are happy to note that there is improvement the way people live. A similar activity has been sponsored by the Agricultural Co-operative Association.

The Detergent Non-Use Movement has a longer history. The movement goes beyond the use and the non-use of detergents and soaps. The Agricultural Co-operative Association is heavily involved in the use of land. Land is where we return our refuse, our garbage, and so we advocate the use of compost that would enrich the land. Like, the water used in washing the rice shouldn't go down the drain but sprinkled instead on the land. And we take care that the plastic bags are not burned but they should be re-cycled and re-used. Some of the plastics are used in pots and are used as pillows(?) but some of them can be recovered and re-cycled.

I don't have a farmland but I am convinced that rice paddies are part of the ecosystem, and rice paddies protect the environment. It is sad that in one part of the world people are starving while in Japan we are reducing rice paddies because we over-produce. I am advocating horticulture so that my children can learn to produce vegetables, that we will plant our own vegetables and use those vegetables from the backyard to use one own's food rather than go out to the supermarkets to buy prepared food. This will contribute to adding to the greenery of the environment. And rice paddies should be preserved because they're part of the ecosystem. A high-yield variety of crop if developed would be very much used in rice paddies.

This small beginning, citizens' movement is a small movement but it contributes to raising new consciousness, new awareness, new lifestyle and new habits. And it should begin by educating the children. It should be part of the school education. Unfortunately, many of the teachers do not have the qualifications to teach this because their life is full of waste.

You have committed yourselves to communication and I am very gratified that you have organized a forum like this because I believe we should ourselves not in a narrow existence but in a broader environment. Then one will begin to see a company, a

new sort of company, or even new politicians who will not put profits or self interest before all the others. And the end result will be a different economic society.

I would like to commend the Commission that the emphasis on the prevention of pollution rather than abating pollution once it has taken place. I feel we can listen to the wind to see the changes of season, to see the colours of the leaves change, and I hope that many of the businessmen can be here or the politicians, and that they would share our convictions. And I sincerely hope that many ordinary people will join in our endeavour to protect the environment. Thank you.

Dr Khalid

Now the last presentation is by Mr Hashimoto, member of the Central Council for Environmental Pollution Control.

Michio Hashimoto

Today, I would like to talk about my experiences in the corporation and environmental issues in the LDCs and its future. First of all, I would like to consider the central issue which is the concern of WCED, that is environment and development. First, we would like to take a look on what Japan have been doing to contribute to development and the environment.

The first effort was the admission made by our Environment Agency Director General, Mr Oichi at the Stockholm Conference of our experience with the Minamata disease, of our failures of our policies in protecting the environment.

The second was the attempt which was a report which came out of the OECD Environmental Policy Review. We have employed 2% of our GNP to comply with the views of OECD but we have found to our regret that the executive policies were not met.

And the third effort that we have put in was in 1983 at the UNEP Conference, our Director General Ohara preferred that we should address ourselves to the topic of development and environment. As a result this World Commission on Environment and Development was developed and it resulted to the Tokyo Declaration which was announced today

At the moment I myself has retired from office and therefore is a very free person. But on a personal aspect, I am engaged in a variety of international co-operative effort. In doing so, I have been placing emphasis on my statements some points which I would like to discuss now.

Ever since the devastation brought by the war here in Japan, Japan had to start from scratch to reconstruct itself. And I, of course, was in the midst of this devastation coming out of this miserable situation and what I felt at that time was equivalent to what people felt at that time. I was engaged with environment policy service at that time but I have felt ever since then that those people who are engaged for policy environmental purpose must always be addressing issues which I have faced in the past. That is environment issue is very easy and fun to deal with and to discuss. But in implementing actual policy, you see that there are a lot of repercussions. There is a lot of criticism from the mass media we policy-makers have to face with and Mr Kobayashi has told us of the effort in the power industry. But we do feel great pressure from a variety of industries. It is important to try to ensure development for different sectors of industry but at this time to ensure good development of the environment.

So, this is what is very difficult for us, policy-makers. I think if we did not have any popular movement which did not go against us, then I don't think that we would have been able to go this much and I don't think we would have been able to do such drastic changes in policy that we have been able to make in the past.

But popular movements are not enough to incite local and national government authorities to come and cope up with the problems. In the year 1970 a special session was held in the Diet to talk about environmental issues and an Environment Declaration was made at that time and on the basis of this declaration, a variety of policy measures were implemented.

In looking back at the kind of policy that has been implemented I often come to consider what kind of a role policy-makers play or government ministries play or politics play in order to alleviate the problems brought about by industrial pollution. And recollection tells us that we have been trying to do in the past was not always correct and that we have to be very frank about admitting our mistakes that we have made in the past. And I'm sure that many policy-makers around the world have faced the same problems and the same regrets.

I have just seen the results of the kind of policies that they have enacted and I think that it is important to look back to past experiences and try to learn from what we have done. And in this process I think that it is important that the public participate. But the main kind of public participation that we encounter is criticism, there is a mass criticism that is directed to the administration. I think that without such kind of participation, discussion in the Diet among politicians and policy-makers can not be enhanced. So, I think that public participation is very important.

Next, I'd like to talk about what we are doing in Japan by way of co-operating with the LDCs in improving the environment in the LDCs. We have been under the UNEP being contributing a lot for the betterment of the environment. First of all we have extended a helping hand to the Indonesian government as a result of the statement which has been brought about by the four major economic organizations of Japan. The statement was developed after their observation of that country. And we have been able to successfully implement policies and to influence grass-roots infrastructure building. I, myself, have been to Indonesia to help in this process.



But I did encounter the fact that it is going to be very difficult to facilitate communication from the very beginning. It takes some time to come to establish the channel of communication and be very frank about airing your own views from both sides. For instance, the lake of Tabaco(?) was a concern of our project and there were people who were concerned with lowering the surface level of that lake. And so, of course, everybody wanted immediate measures to conquer the problems but immediate results cannot be obtained. You have to be patient and wait for the results.

Another important point is that we have to be able to positively participate in international projects. We have been doing so. I have been participating in a lot of advisory processes for developing tropical forests. Actually my experience was with Indonesia. There was a change in government during the time I was engaged in this process and it took a long time.

Actually, when we look at the policy measures implemented here in Japan, it took about 13 years to make an effective policy, and it was after 40 years the devastation of the war that people were able to implement effective environment policy. So we have to understand this facts. There are pollution caused by the numerous industrial complexes, by the agricultural sectors, and by the urban concentration as well.

There are a lot of differences amongst countries and therefore, there must be an awareness of these differences and the differences of the kind of environment in which countries are placed in. Unless you understand these differences it's going to be very difficult to effectively institute co-operative effort. So, co-operative effort must be made and international co-operation must be made on the basis of common understanding of the problem. So, I would think that the Tokyo Declaration is a sector furthering understanding in this respect.

There was a mention of the Lake and Environment Committee by Mr Yamada and the conference which was held in Shiga, the Conference on Control of Pollution of Lakes. In this connection it is important to try to understand

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Cont. of Mr Hashimoto's statement

control of pollution of lakes and I think in this connection it is important to try to understand whether environment and development can proceed hand in hand. I think that the steps for environmental protection and steps towards industrial development do not go hand in hand. Sometimes it diverts from the road and sometimes it conflicts with each other. And so it is important that people in both sectors, the environmental protection side and in the industrial development side, come to an understanding about each others' concerns. Then we have NCRD and the UNEP, which are engaged in the different types of development projects. It is important to try to understand what local government authorities are concerned with in trying to bring about a solution to environment and development.

About making change, which was mentioned in the Tokyo Declaration, was the great change that was experienced in Japan, and unless such drastic change is encountered, I think it is very important to institute various environmental measures that can go hand in hand with development. Looking at the development of the RDs, they have come to build a sufficient infrastructure and to enable industrialization. But I think that the problem of environment cannot be coped with

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without looking at the grassroot problem. Lastly, I would like to mention that, although it seems as if the Tokyo Declaration touched slightly on environment as a global concern, but I think that environment is a global concern and therefore we have to think very seriously about what kind of global effect environment will have, and what effect it will have on people around the world. And I think it is important that various checks and examinations should be made at a variety of stages throughout the world so that we would be sure about the kind of environment in which we are living.

Here there are a lot of people from the government, the political arena, the law and the sciences, but I think that each of these people from the different arenas must get together and come to a common understanding about environmental issues. First, as in the case of Japan, there was a very strict sentence passed by the courts here concerning the preservation of an amicable environment in relation to the construction of an international airport, and I think that such types of sentences is very important for preservation of a satisfactory and comfortable environment for mankind. Thank you.

Mansour Khalid

I think we have had five presentations from five persons covering a widely representative range, academics, managers, youth, community leaders and government officers. And the presentations in their entirety reflect the heightened concern of the problems of environment. In some aspects they show us the achievements realized by Japan, and in all of them one senses that there are some fears and concerns about unresolved problems. I think several Commissioners have some remarks to make, so we will take half an hour an interaction between the presentors and the Commissioners. I will start with Commissioner Stanounik.

Janos Stanovnik

Thank you, Mr Chairman. I would first like to thank the young student, in my incapacity of speaking in Japan, I will just call her Miss Butterfly, for her most beautiful poem which she has actually brought to us. And it is not that I would like to address any question to her, but rather to our Secretary, and would like to ask whether there is still time that in our section of our report on forests we find a small little place where we would still record a little bit of this poem of hope, because I think that the entirely world should rather hear it and profit from it and not only us who have today had this privilege. But the real reason that I am asking for the floor, Mr President, is that I would like to ask a question to the gentleman representing the electric power company and to tell him that I was most impressed by his presentation and would therefore like to see if we could benefit somewhat even more from his and his country's experience which, I will immediately add, is so much unlike the experiences which we have met in other parts of the world. Now my question is actually the following: I understood him saying that Japan generates one third of its electric power from the thermo stations which are fired by liquified natural gas, which is environmentally clean and one third from the nuclear power stations. Now we find anxiety and disquiet in connection with the nuclear power stations, particularly after the accidents in the States and in the USSR. We find this disquiet all over the world, and I would be surprised if there would not be a little bit of anxiety even here in Japan.

In the light of that I ask him, in comparison with the liquified natural gas-fired stations, how do the costs of one and the other actually compare, and if liquified natural gas stations are also clean in as far as  $\text{SO}_2$  and  $\text{NO}_x$  are concerned, does Japan plan for the future a relatively higher share of NLG-fired stations or do you plan to maintain this share as it stands at the present?

Osamu Kobayashi

Thank you very much for the question. Let me deal with the question of comparative costs. More recently, the Japanese Government, Ministry of International Trade and Industry, has done some calculations. This is a long-term average over the life of the equipment: for hydro and thermo, including NLG, and nuclear reactor, the most expensive in Japan is hydro, followed by NLG and other thermo, and the most inexpensive is the nuclear energy in Japan. And the difference is about 20 per cent. 20 per cent hydro is most expensive, thermo less 20 per cent, and nuclear energy again less 20 per cent. So in the future, if we are to build an electric power generation plant, the nuclear plant would be the least expensive. Of course, we are mindful of the accident of Chernobyl, and to those of us engaged in the electric power industry, that accident was indeed a great shock. And in this country, a few days after the Chernobyl accident, we had a very very small fall-out, but we were able to measure radioactivity here, and a newspaper printed that. But our reactor type is different from the ones used in the Soviet Union and we do not have this similar management problem or the operational problem that Chernobyl had. We do not have a problem of the operators. We feel that we have the safety that would prevent an accident like that. We are convinced of that. The graphite-cooled reactor of Chernobyl is a different reactor type than that in Japan. We will not have a destruction because of the rapid power-up. Our reactor type will not have a rapid power-up.

From the planning phase, designing phase, operating phase, we have given tremendous commitment to ensuring safety. As I have said in my presentation, Japan must import most of its energy consumed in this country, and so today we have thermo plants, not just NLG, but we fire oil and coal, about 60 per cent is today thermo. But, in the future, there would be increased use of nuclear power plants because the fuel cost is very small for the nuclear power generation, and so nuclear power has advantages far beyond the fuel cost. We must continue to

development the use of nuclear energy but ensuring safety. I have said that our policy is to adopt the best mix. We must have a mix of hydro power plants, thermo power plants and nuclear power plants, and depending on the fluctuation of the use, we must have the best mix. That would enable us to meet the requirements. The main stay would be provided by the nuclear power. I hope this answers your question.

Stanovnik

Sorry, just a very small question. What is the share in the total cost of nuclear, the share of cost of decommissioning the nuclear power stations?

Mansour Khalid

Before you answer this question, possibly Commission Hauff has...

Osamu Kobayashi

The cost of the decommissioning is not part of the cost that I have mentioned. But even, including the cost of decommissioning, there would be no great difference. Nuclear energy would still be the least expensive.

Volker Hauff

I would just like to add one little question which continues the line of the argument of my colleague. What is the share of the costs dedicated to the solution of the problem of the final disposal of high radioactive waste, where you have to make sure that this kind of waste does not enter for thousands of years the biosphere, and do you have a sound technical solution to that problem today?

Osamu Kobayashi

Thank you for that question. I do not have the figures available, but I would like to answer your question later when I get the figures in my hand. Is this all right?

Emil Salim

To Mr Hashimotosan. I would question that you mention environment and development cannot go together. That development creates environmental problems or environment will be at the expense of development. Do you see there is the possibility of going hand in hand, environment and development, because development is a long-term issue, and environment requires that resources are to sustain the long-term development? Question number one to Mr Hashimoto. Just brief question to Mr Kobayashi: Is it true that in the cost of nuclear I do not mean necessarily in figure, but is in the cost of nuclear included the cost of managing nuclear waste, to decommission the factory, the element of risk; are these components of costs included in your cost structure? Or is it outside your cost structure. If so, is nuclear energy subsidized in terms of settling nuclear waste, decommissioning of the factory later on, and so on. So, who picks up that cost regardless of the numbers? Thank you.

Michio Hashimoto

I would like to respond to the question raised by His Excellency Salim. I think that it is possible for development and environment to go hand in hand, little by little. Although this process is gradual, I think this has become possible now. There is a lot of difference between the strength of the authorities engaged in environmental administration and developmental administration, and therefore it is important to have a balance between these two different administrations. Ever since 1970, Japan has been experiencing for about five years since that time drastic change in the balance of power



between the environmental authorities and the developmental authorities. As a result it was considered that it is important to make a very good environmental assessment and also to impose necessary legal measures.

Actually, we did not succeed in laying legislation for methods of environmental assessment but actually the local government bodies do have their respective ordinances which can control environmental assessments. Without environmental assessment, I think it is very difficult for any industry in Japan to bring about development, and therefore they have to engage in a very long process of development. But, of course, environmental assessment process is also a very long process, and in terms of scientific methodology, there are also various uncertainties involved, there are also a lot of conflict of interest between the people concerned, and there is also conflict of use among the experts. In particular when you come to grips with problems which face a small country like Japan, it is very difficult, and the power of decision making is given to the administrators and therefore the people who support the administration can get their project passed, and after that the administration is responsible for implementing whatever policy they would like to implement.

Osamu Kobayashi

With regard to decommissioning. The cost of decommissioning, as I said, is not included, but even with the decommissioning costs, the economy of nuclear power plant is proved. The other thing: The operating nuclear power plants, the cost of radioactive waste for the operating power plants, this is included in the cost.

Volker Hauff

I would like once more to put the question: Beside the question of who is paying for the costs, what is the height of the costs. Do you have today a solid real solution to the problem of high radioactive waste and of dismantling?

Osamu Kobayashi

On the question of who would pay the cost, at present it is the nuclear power station that uses the nuclear power plant, so it is part of the generating cost of electricity. I am not an expert engineer on nuclear energy, but although there might be some technologies that are not fully developed, but we must continue to develop that technology as we developed the use of nuclear energy, and that is the basic policy of this country.

Nagendra Singh

Esteemed Participants, gracious Ladies and Gentlemen, I have been overwhelmed by the kindness and courtesies of the host country, and I thought I would pay a word of tribute before I put a question. I come from a land where Buddha was born but has been forgotten, and I come to a land now where Buddhism is still practised. It reminds me to narrate a parable, one from the "Chadgas", the life stories of Buddha. He was wandering from village to village in search of principles of salvation, and he was approached by the villagers who asked him 'how can we succeed in life and obtain our objectives?' And Buddha replied that there are three solutions, three methods that you must practise, the first is you must respect the laws of nature. By that he meant, because the villagers soon asked him 'what are the laws of nature?', and Buddha told them that one is that you must have practised moderation, the second is you must not annihilate the variety with which nature thrives. Buddha himself was a great believer in nature, he did not believe in God, but he believed in the principles of nature. I find that in Japan Buddhism is not only practised in the temples and the Shinto shrines, but it is practised in life also. You lead a great life of moderation, and you believe in maintaining the lifestyle which is respecting variety, the lifestyle is one of respecting species' variety and diversity.

The others were discipline and organization. I find that the way in which this conference has been convened here, is an

ideal example of how disciplined and organized this nation is. And Buddha told the villagers that if you want to change even the trend of a whole nation you can do so if you are organized and disciplined. This is what Buddha himself did. He was a reformer, he was trying to preach against certain principles of Hinduism, and he said he had to respect the laws, but the only way to do it was to bring about public awareness and consciousness, and to be able to do it in a disciplined and organized manner.

The way in which we have had this conference convened really feels me with admiration. You are all assembled in the right numbers and proportions in which we were told that you would be present here to participate, and every one is disciplined and organized to conduct himself in a manner in which you can produce results.

I think the whole world has to take an example, a page from your way of life, in which you organize and discipline yourself and make yourself effective. So I pay a very warm tribute coming to Japan and taking the great example that your nation has set throughout the world of moderation and respecting species, and even doing everything in a lifestyle which does not go too far in anything. Even if you have energy, don't concentrate too much on nuclear energy. Have all other kinds of energy as well. This is what Buddha taught. Don't put all your eggs in one basket, have a basket of currencies and you will never fail, and that is what the lifestyle of Japan is.

The only question that I wanted to ask was that in India we face the problem of even the small patches of greenery that exist in urban cities is being attacked by the richer citizens, being bought up and turned into houses and construction, and the result is that the little patches of greenery that exist are fast disappearing.

When I came here, I had a lady distributing pamphlets that that was also being experienced in Japan. Is that so, or is that

not so? And if that is so, is anything being done by the public to stop it?

Michio Hashimoto

Perhaps our experiences are slightly different, but I said that the growth of greenery in this country is perhaps because of the different reasons. I think the Japanese is consuming less rice today, and that is why rice paddies are not used. We are not producing rice as we used to in the past, and many of the rice paddies are not used today because of the high-user variety. The loss of greenery in this country is mainly because we are losing the rice paddies. The Government gives order every year of how much acreage of rice paddies to be not used. And after two years on non-use, the rice paddies become shrubs and it becomes wasted land, and it is very difficult to return those wasted lands back to the rice-paddies once it has been abandoned, and left unused for a year or two. So my loss of greenery is mainly due to the loss of rice-paddies. This is a slightly different from the Indian experience.

Mansour Khalid

Well, I think we are going to take a break for 15 minutes, and then come back for an interaction with the public. Thank you.

COFFEE BREAK

Warren H. Lindner

First of all, let me say that we have a very large number of questions, and a very large number of people who have expressed the willingness and the desire to make a statement to the Commission. I do apologize that we have time constraints and we will try with your cooperation to get through as many of the

people who have requested the floor as possible. What we would like to do is call upon the person whose name is listed on the sheets that we have here in front of us, and we would ask you to identify yourself and they will bring a microphone to you so that you can speak from your place. If you are going to make a statement, rather than posing a question, we would ask you in consideration to all of the other people who are here who also wish to speak to keep your statement as brief as possible. I know that you may have a lot of points to give us and a lot of points to make, and we really do want to hear them all, but we do want as well to give as many people as possible the opportunity to speak.

Mansour Khalid

First, we have quite a number of questions in hand. I call upon the first one to pose those questions, to make them known to everybody, and we will try on this side to respond to those questions. I call first on Hishashi Shiyoda, Graduate Student. You can pose your questions.

Hishashi Shiyoda

In this Tokyo Declaration, I think we see that there is a magnitude of issues to be covered and I was very much interested in the Tokyo Declaration. The various environmental issues which must be faced on a global scale, which is noted in the Tokyo Declaration, is solved only by uniting the peoples of the world not in the concern over environment, but I think it is very difficult to try to unite the opinions of people around the world, and incite them to the understanding of the importance of protecting the environment. It will take a lot of time. And, I think, it's going to be important to have some kind of an authority which can have the power of authority and enforcement over this issue, and to be able to implement the necessary measures across borders. And I would like to hear your views on the necessity of instituting such a body. And I think that in order to solicit the participation of all of

mankind on this world, I think it is important to have a big organization, and under this umbrella of an organization it is important to have not only politicians, but people from the industry, journalists, scientists, doctors, and people from the public. I think it is important to have selected people from different groups to debate this problem, and in order to have a lot of people's views reflected, I think we have to have a participation of a variety of people and have them deliberate on a variety of environmental issues, and to come up with specific and concrete measures to cope with the problems of the global environment; and then to come up with the necessary policy measures to cope with problems of the world on environment and development.

I feel the necessity, and I think it is also necessary to try to solicit the participation of the youth in this regards as well.

Mansour Khalid

I think this is a very good question, and the type of question of the issues which it poses were issues which confronted us, and which we addressed. The problem is not really one of shortage of international organizations with an ability to face those problems. If anything, we are a plethora of international organization. The problem is the coordination and the efficiency of those organizations. Those organizations are inadequate, because by their very nature they cannot be otherwise. I mean, they emanate from a concept of sovereign states. Those problems, by definition, transcend one state. If you take action in one country and they cause pollution in the seas, pollution in the air, they won't stay within your boundaries. So the concept of sovereignty itself is a obsolete concept.

But we are faced with the fact of life and, indeed, the fathers of the United Nations Charter, who conceived the Charter as a response to a tragic situation which the world faced then, I

mean, drafted this Charter in the name of the people. The Charter of the United Nations is a Charter which says: we the people of the world... It does not say: we the governments of the world... But the fact of the matter is that the people are represented by governments, and it is the governments who form those organizations. So, we have certain political realities which we have to face and certain patterns which have to change, certain visions of our relationship which have to be change, and that is the sort of thing we address ourselves to. It is not simply the artifice of how to organize coordination between existing status, the whole philosophy, the whole vision on which those organizations are based. That is one thing.

Secondly, for this change to come, it cannot really come if we continued to use the same mechanism for response to action and change will have to come. In its formal manner it will have to come governments. So in order to get the governments to move in the direction we want we need the people. This is why we say that our appeal is basically to the people, and that is why also in our debate, in our internal debate on this issue, we time and time again talked about popular participation, participation in the decision making within the national borders. But more important than this, participation by popular forces in the decision-making process at the international level. That is where the role of the NGOs comes in. They have a very important role, and it is in that contents what said about scientists, about youth, about women groups become very, very, very relevant, particularly in issues like this, the issue of environment and development.

Yaori Matsui, Journalist

Thank you very much. I would like to pose a question with regard to the role of women, because I believe it is the woman who becomes the victim to misconceived development. And so in Japan, environmental movements is sponsored and promoted by women and so I ask in the Commission's report what expectation do you give to the women for the sustained development?

Mansour Khalid

We do not invite responsibility on the basis of sex. But I am going to ask Margarita to answer this because she knows very much about this issue in its developmental context.

Margarita de Botero

Thank you Mr Chairman. I also want to ask some other Commissioners, some other colleagues of mine to answer the question because I think that men do have some times opinion about women, so it's their report. I have been very impressed by the Japanese growth, by Japanese development. This is the first time that I have visited Tokyo, and, of course, I know a little bit of it, but it is really impressive. And that, I hope, has revitalized instead of destroyed part of your ancient formidable culture, because what we talk about in the Commission is about new, different growth, and that is what environment and development is about. And I am very impressed about the role of women in NGOs because I have been approached, fortunately for me, by groups of women who are defending the environment in real political, developmental work. We have spent 20 years going from the environmental movement being a romantic point of view, taking into account, a new age of scientific thinking, and scientific data, and now, I think, we have come to the political stage of our environmental work.

I was very impressed also that two women today took the podium to talk about environmental movements. But I also would like to see, apart from the house-book for environment, a success-book for environment. Which of these movements really has made it to stop this destruction, which of these movements have incorporated political issues, and which of these movements have been not only denouncing for years on end, like she said so beautifully, this is the 15th time or the 15th year, I tell this story again again, and may be I can hope that only two or three people can join me every time they hear me. Because today, the women are taking part as, I think as always



in the world, in the local day to day affair of the environment, or it could mean the house, and this is the house of men when we are talking about ecology. And they have a strong sensitivity and responsibility towards their environment issues. Environment not as only an elitist word, not a discourse word. It means 'water', soil for production, it means their children's health, it means day to day basic confrontation of the women of the world with the environment, and also you go round the world and take a look, in all the environmental movements of the world, in the Green Parties, in the green movement, women are taking the lead. So I would enthusiastically support my friend who has been accompanying us all through the Commission's work sitting outside, taking notes. I am also very grateful for a group a people who have taken the trouble to give me the recent Japanese antipollution movements 'Trumi Undo', the papers on the Minamata Disease, the things that we don't have the time to hear, I appreciate that somebody puts it always on the table. I am very lucky to know that we are perhaps the new youth and the new resistance movement that is going to change the culture of today's time. I do encourage the women like I have seen alround the world, to take a leadership in that. Maybe, it is the one big opportunity. Thanks.

Mansour Khalid

Okay, thank you Margarita. The next question come from a student, Marashiro Otsuka.

Marashiro Otsuka

My question to the Commissioners has to do with the environmental policy of Japan in the future. What do you expect of Japan in terms of the environmental policy? Because Japan uses lumber and we are offenders not victims because we are felling trees everywhere, and tropical woods are used in our daily life, and I don't think we Japanese are conscious that we are felling other people's trees and consuming them

and I think it is important to educate our people. So what does the Commission expect in terms of Japan's environmental policy for the future? The Commission talks about the new development, a different development, of course, using capital, using technology. The conventional pattern of development is a family away(?), but if we are going to have a new development, how can the conventional technology be used for new development while protecting the environment?

Mansour Khalid

I would ask Commissioner Salim to answer this question.

Emil Salim

The concept of development, sustainable development, as mentioned in the Tokyo Declaration, starts the approach to progress which meets the needs of the present without compromising that ability of future generations to meet their own needs. So that the needs of today must be satisfied without destroying the resources for the future generation. Tropical forest timber are a renewable source, it can be used whilst maintaining the continuation of their existence. What is needed now from Japan is one: If efforts are made to buy timber, is it not possible to buy in the form of processed commodities, not raw material, in order that the value added, the additional value, in transforming the raw material into finished woods, that that activity can be located in the developing countries?

END OF TAPE 2 - SIDE 1

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Cont. of E. Salim's intervention

can be used by maintaining the continuation of their existence. What is needed now from Japan is one, if efforts are made to buy timber, isn't it possible to buy in the form of processed commodities not raw material in order that the value added, the additional value in transforming the raw material into finished goods, that that activity can be located in the developing countries. With an increase of value added less tropical forest area is needed because with the increase value the quantity of the area can be reduced.

Second, that in this price of this tropical timber, a law can be given for re-plantation, reforestation. In a way, what sustainable development comes to mean is that you make use of the natural resource without reducing the capacity of that resource to sustain continuous developmental efforts.

It is this change of outlook in development which is important. So, what do we expect not only from Japan but from all countries? How to look to the developed process from that angle? Development is not a one shot operation; development is a continuous process. So the notion of what can we do is how

to expand the concept of sustainable development into the minds and the calculations of business community, politicians and the grassroots level.

Yoshi Susuki

I live in Japan and one of the patients of air pollution. I suffer from a severe impairment because of the pollution. Japanese economy grew very rapidly. My asthma deteriorated. I am 39 years old but from the age of about 18 to 23, this last 5 years I was hospitalized because of my severe asthma. I had no joy of life, joie de vivre in those five years. I had to be hospitalized, I had to have oxygen and injections, body fluid injected in me, and that was the kind of life I lived. No joy of life.

I got a job and went to work but I can not work for a long time like ordinary people. For the last ten years I can hardly work. When the law was enacted, the law concerning the abatement of pollution, it has given me some compensation. That is the only income - income from the compensation that this law provides. And if I should suffer another disease on top of asthma I really don't know what to do.

My sister's married and has children and she has nice family life. But I live alone. Cold days are worse days for me. In cold days if I walk a hundred metres my breath becomes very difficult and stairs are difficult to negotiate. I can hardly move on my own. I drive a special car to help my mobility. Without the car I really can not live.

I wanted to share my state with you and I have had body fluid injected this morning and I must probably go back to the hospital ward after I withdraw from this hall. But I wanted to be here and I wanted to share with you the state that I'm in.

We have about a hundred thousand patients who suffer from pollution diseases. And half of these patients are children below the age of 15. Some of them suffer from Minamato disease. There are 10,000 patients of Minamato disease and they're really not compensated enough. And other patients from Kanemi(?) oil disease and there are other pollution patients. But the government is not doing very much. It is time to abolish the special zoning to give compensation to the zones.

I came here to solicit your support. About 10,000 of my friends have died in the last 10 years due to pollution diseases. Some people say that the pollution in Japan has been stopped but it is not stopped and I would like to solicit support of the Commissioners, the members of this special Commission, to help us. The pollution problem is not ended in Japan. Thank you.

Dr Khalid

Yoshi is a member of the Association of Patients of Pollution Diseases. Her moving words must have given you a picture of the suffering of those people.

The next question is from Sister Jane Halon.

Jane Halon

I want, first of all, to thank the Commission for their fine work. And secondly, I would like to say that the destruction of natural resources and the use of these natural resources by the military worldwide is one of the greatest dangers to the natural environment. And this was not mentioned in the Tokyo Declaration. I think this is a very serious omission.

Dr Khalid

Well, the Tokyo Declaration did not omit reference to this but I'll let Commissioner Sahnoun answer this question.

M. Sahnoun

I would like first to say, as the Vice Chairman, how touched we were by the testimony we just heard before the last question, the lady who spoke to us on problems affecting her due to pollution. You remember the story which one of the Commissioners, Judge Singh, said before, that problem of the law of nature. If we don't respect nature, nature takes its revenge. And actually best thing she would do is what she did here, to share her experience with the maximum of people so that they understand, that industry, government, public opinion understand that if we don't take care of nature, nature will take care of us; but if we don't take care about pollution, pollution will make more and more victims. And it is ultimately industry and it is ultimately government and it is ultimately society which will pay.

A very interesting experience when we met in Brazil. We went to a place called Cubatao, a very heavy industrialized area. What happened because of the pollution of the environment, because of the emission from the industry, the area which is a narrow land on the coast. Behind the factories are a number of hills and the hills have lost all their green cover - the forest. And there was erosion and a big landslide and the hills are practically coming down over the factories so that some of the factories had to close. This is a very illustrative image of how nature can some time take revenge if don't take care of it.

Last question, we sat and discussed the problem of security, of arms race, of armament and the effect of military spending, of billions and billions which are spent on armaments, and which

certainly have a great effect on our resource base. It's just like really building very dangerous toys which have no real interest in a sense for society but which are destroying our resource base. So, we did focus on this, of course, taking into account the world as it is, divided, unfortunately, here and there, having to cope with conflicts, local, regional, having to cope with threats.

We talked about, in a sense, this kind of military culture. The way that we feel that the only way to answer problems of this sort is to re-arm ourselves and therefore to destroy our environment. We certainly focus on that at length. The Tokyo Declaration is not a summary of our deliberation, of our discussion. Tokyo Declaration is a spirit of Tokyo. We call it a Tokyo Declaration because we want to, in a sense, give a message and that message is that the world is one. That whatever is done here affects other people elsewhere. And we mentioned in the last part of the Tokyo Declaration the problem of peace, the problem of security - it's in a way covering the discussion which, of course, in full detail, in much more detail, do cope with this matter which was raised by the lady. Believe me, it was treated at length and we believe in an adequate manner and we are very conscious of it. Thank you.

Patrick Tan

Thank you, Mr Chairman. Before I start with my question, I would like to give a short explanation about my presence here so that my question can be better understood. I'm actually here with group of 10 friends from 10 countries participating in a Jaika(?) training course on environmental administration. We were at Escuba(?) and we cut short our trip there to be present here so that we can listen to the Commission's deliberations, and also at the same time congratulate the Commission that they have done so far.

Now, let me deal with my question. In a context of developing country as all of us are from, I would like to ask the Commission whether in its deliberations of the change in the quality of growth there had been any discussions on the quantity of growth as well. By that I mean that lot of developing countries are trying to catch up with other countries, with the developed countries, in order to meet the aspirations of our people and also to supply the necessary goods for the people.

But in the process of doing so, we are also degrading our environment. So I would like to ask the Commission in this context whether there is any form of suggestion or any form of guideline in their report as to the extent of development, or extent of growth that a developing country should go into so as we do not fall into the problems of developed countries, in the quest for development.

My second point is just for clarification. What are your proposals to translate your views into action after this? In other words, what is the next phase of your Commission's report?

Dr Khalid

Thank you. Commissioner Stanovnik will take up this question.

J. Stanovnik

Thank you, Mr Chairman. With respect to the growth aspect, we attached the problem more from the quality side and less from quantity side. Particularly, we considered that it is not important that we compete with each others in figures. We think that the process of development, as we call it rather than growth, is for the purpose of satisfying human needs and not just to compete with others to achieve the same figures.



We therefore try to convey a new approach and philosophy of development for which, of course, growth, in the sense of the increasing wealth, is a prerequisite but is not the objective. In our view, the objective must be to improve the quality of life. But improving the quality of life not be attained through a new consumerism which over-exploit the resources, but we rather, in our report, recommend how to achieve better with less. Which means that we recommend very highly the saving and conservation of resources by putting more knowledge into the production mix and thus to produce and satisfy better the human needs with the lesser use or destruction of resources and lesser pollution.

We, therefore, put very great emphasis on the so-called human resource. We consider that poverty and unemployment is one of the biggest waste of resources ever. When we, therefore, recommend sustainable development as a new approach to development we see that mobilization of human resources namely, unemployed people or poor people who are not properly integrated into the economic process, that this is one of the very basic prerequisites of this new approach to sustainable development.

To round up, in answer to your question, there was in our view in the past decade after the second war too much emphasis on this question of the so-called gap. And we do not think that it is attainable, that, for instance, the entire world starts consuming energy at the present per capita level of the most developed countries. To the contrary, we consider that the energy use in the most developed countries is too much wasteful; that they must rather come down in their abuse of resources particularly energy, while the developing countries with the modern technology must be able to satisfy the human needs but possibly with less energy per unit of production that is at present the case in the world economy. In this sense, we have

been very much interested to hear from the presentation this afternoon how Japan has been, particularly in the course of the last two decades, economizing its energy and other resources. Thank you.

Goto

My name is Goto working as a researcher at the National Institute for Environmental Studies in Escuba(?). My question is somehow related to the former speaker - it's about the technology transfer. If I remember correctly, in this morning's Tokyo Declaration, I think the Commission sort of ...that technology transfer in very naive sense, to my own ideas.

As a chemical engineer by discipline, I know that technology in itself has good aspect and bad aspect for the environment. I am referring to technology transfer from advanced nations to developing countries. From experience I know one example that one of the advanced nations transfer waste management technology to one of the local communities of an Asian country where there is no electricity. But that technology should be ran by electricity. And also, I know that there has been one technology transfer of refuse treatment from one advanced country from a developing country where the refuse composition is totally different and then the technology didn't work at all. Also, some of the technology for economic development has been improperly applied in developing countries, and has caused a lot of chemical contamination, or other things.

My question is how this technology transfer problem was discussed in the Commission. I would like to direct my question to anybody on the Commission.

V. Hauff

I think that is a very, very important question and we discussed it several times very intensely within our Commission. What would be the role of technology in the future in solving environment problems? And this is certainly a very complex thing. Technology doesn't come from heaven. It is a consequence not only of the knowledge of economic interest, but also of the cultural background, even of religion, which plays a certain role in the development of technology.

And if you do look to this problem, it is quite obvious there are at least two important aspects. One is dealing with the role of technology in industrialised countries. In the past we normally used technology and science in industrialised countries in order to solve a problem which was coming up. So what we did was an end of the pipe(?) technology. Not avoiding an environment problem but trying to solve it. We didn't try to avoid the waste but we are now forced to use research and technology in order to find a solution for the handling of the waste.

So what is totally necessary is not only technology transfer but at the same time a fresh new look to technology in industrialised countries in order to develop integrated technology. To look into the development of technology not only from the aspect of solving an existing environment problems but of avoiding environment problems.

And the principle which is important in that context and in which we spent a lot of time in our discussions and it is described in our report extensively, is the principle which should lead to new technology in order to anticipate and prevent for industrialised countries.

The other aspect is how to transfer technology from industrialised countries to developing countries. And it is quite obvious that one of the prerequisites is that you do have

the people in developing countries who do have the background of handling such technology. So, one of the important things if you are interested in intensifying technology transfer, is to create the necessary infrastructure in developing countries, so that those countries are able to define what they really need, what kind of technology they really need, and then to create, to establish tried research projects between developing countries and developed countries.

But this is only possible if there is a minimum, a critical minimum, of infrastructure in the developing countries. That's the reason why we are arguing in our report to enhance the scientific and technical infrastructure in the developing countries. Of course, in the developing countries there are lots of problems which don't exist in the industrialised countries especially with respect to the development of new technology for agricultural purposes. So the second reason for increasing the infrastructure of those countries is necessary in order to solve the problems. I fully agree with you that in the Tokyo Declaration this was put very, very short. This may create the impression that we dealt with this problem in a naive manner but the Tokyo Declaration is very brief. At the end of October the report will be published and there it becomes more clear that we really dealt in an adequate way with this problem.

Dr Khalid

Thank you. Well, unfortunately, due to time constraint we have to call off this meeting, the time frame within which the meeting was set is over.

I must add a few words by saying that both sessions which we had this afternoon were very instructive for us. We were exposed to some experiences; we had some very moving words, and all what we had learned will certainly reinforce our faith in the friends of nature, in the messengers of faith in a new

world which we are all striving to construct and this meeting in particular shall have a special significance for us because this is the first public meeting we had after the Tokyo Declaration which represents the launching pad for our report. This is the first meeting and for us this is really an spiritual and a moral uplift.

Our next meetings will take place in different countries of the world, starting in London, we'll be going to Hungary, India, China, Kenya and so on. But the first meeting we had is the Tokyo meeting and we are very encouraged by this meeting. We are sure that we're going to leave Tokyo with some very good friends and very good allies of the Commission and what the Commission stands for. Thank you all for your contribution and for your presence with us this afternoon.

Dr Okita

I would like to be very brief in the interest of time. I hope you have come to appreciate the role and functions of the Commission. I hope that you will read our report when it is published. We hope that we can translate the report into Japanese as soon as possible.

I hope that the Commissioners of the Commission have come to understand what is the actual situation in Japan about the environment, what views Japanese have for the environment. As you have listened to the views of the Japanese people here today there are many movements on the protection of environment. You have heard from the people the many grassroot level activities on the protection of environment. You have listened to Mr Hashimoto, and to a young student who is very active in the protection of the rare specie of butterfly Oomurasaki.

Judge Singh has touched on the philosophy of India. He talked about Buddhism and I was very moved and impressed by his speech

about Buddhism. We have many Buddhism believers in Japan and I agree that many of the audience was very impressed by the presentation by Judge Singh. There had been discussion about nuclear power generation, this issue was touched and deliberated by the Commission. Mr Kobayashi has shared his experience with us on the behalf of the Japanese business corporations.

Global environment is very important but what should we do to improve the environment in a global scale? It is a very difficult question for the Japanese, ordinary people. Ms Yamada said that we should start anything we can do at hand. Ms Sakakibara shared her experience with us. After this we can start with small things and it is very important for you to share experiences with the others.

The per capita income has increased among Japanese because of the exchange rate. I understand that 5 million Japanese people who went abroad for sightseeing and among them there were many young people. It is now easy for Japanese people to go abroad. I hope that if you ever go abroad do not spend time looking around, sightseeing, I hope you will open your eyes to see what kind of measures they are taking abroad the protection of environment, and what is the actual situation overseas.

To other nations, don't go where you can see only temples or scenic places. That I hope you will have one purpose when you go abroad for sightseeing, that is evaluate the environmental situation in other countries. Over the past three years, the Commissioners of this Commission have shared experiences and views. The Commission's task will end with this Tokyo meeting but as Dr Khalid said this report is a kind of a launching pad for our future activities. We hope that each one of the Commissioners will share his views with others in the future for the implementation of our recommendations.

We need the active participation of the people at grassroot level and mass media and many other people. I hope the

Japanese people should do what they should do. We share this globe. You are a national of one nation but you are at the same time sharing this same earth with many other people all around the world. I sincerely hope that the symposium will help promote this idea outside of this hall.

I would like our gratitude to the Commissioners. It is a very fine day today and it has been fine for the past several days, but you have been too busy and you have been confined in this meeting room for discussion. Thank you very much for your effort and I would like to thank the Japanese people for the organization and for your effort. On behalf of the host country I would like to thank all the participants and Commissioners. Thank you very much indeed again.

END OF TAPE 2 - SIDE 2

END OF TOKYO PUBLIC HEARINGS

February 27, 1987

Tokyo, Japan